

§ 178.3530 Isoparaffinic petroleum hydrocarbons, synthetic.

Isoparaffinic petroleum hydrocarbons, synthetic, may be safely used in the production of nonfood articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The isoparaffinic petroleum hydrocarbons, produced by synthesis from petroleum gases consist of a mixture of liquid hydrocarbons meeting the following specifications:

Boiling point 63°–260 °C, as determined by ASTM method D86–82, “Standard Method for Distillation of Petroleum Products,” which is incorporated by reference. Copies may be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia, PA 19103, or may be examined at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.

Ultraviolet absorbance:

260–319 millimicrons—1.5 maximum.

320–329 millimicrons—0.08 maximum.

330–350 millimicrons—0.05 maximum.

Nonvolatile residue 0.002 gram per 100 milliliters maximum.

Synthetic isoparaffinic petroleum hydrocarbons containing antioxidants shall meet the specified ultraviolet absorbance limits after correction for any absorbance due to the antioxidants. The ultraviolet absorbance shall be determined by the procedure described for application to mineral oil under “Specifications” on page 66 of the “Journal of the Association of Official Agricultural Chemists,” Vol. 45 (February 1962), which is incorporated by reference, disregarding the last sentence of that procedure. For hydrocarbons boiling below 121 °C, the nonvolatile residue shall be determined by ASTM method D1353–78, “Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products;” for those boiling above 121 °C, ASTM procedure D381–80, “Standard Test

Method for Existent Gum in Fuels by Jet Evaporation,” which are incorporated by reference. Copies may be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia, PA 19103, or may be examined at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.

(b) Isoparaffinic petroleum hydrocarbons may contain antioxidants authorized for use in food in an amount not to exceed that reasonably required to accomplish the intended technical effect.

(c) Isoparaffinic petroleum hydrocarbons are used in the production of nonfood articles. The quantity used shall not exceed the amount reasonably required to accomplish the intended technical effect, and the residual remaining in the finished article shall be the minimum amount reasonably attainable.

[42 FR 14609, Mar. 15, 1977, as amended at 47 FR 11847, Mar. 19, 1982; 49 FR 10112, Mar. 19, 1984]

§ 178.3570 Lubricants with incidental food contact.

Lubricants with incidental food contact may be safely used on machinery used for producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section:

(a) The lubricants are prepared from one or more of the following substances:

(1) Substances generally recognized as safe for use in food.

(2) Substances used in accordance with the provisions of a prior sanction or approval.

(3) Substances identified in this paragraph (a)(3).

Substances	Limitations
Aluminum stearoyl benzoyl hydroxide	For use only as a thickening agent in mineral oil lubricants at a level not to exceed 10 pct by weight of the mineral oil.
<i>N,N</i> -Bis(2-ethylhexyl)- <i>ar</i> -methyl-1 <i>H</i> -benzotriazole-1-methanamine (CAS Reg. No. 94270–86–7) .	For use as a copper deactivator at a level not to exceed 0.1 percent by weight of the lubricant.
BHA .	
BHT .	
α -Butyl- ω -hydroxypoly(oxyethylene) poly(oxypropylene) produced by random condensation of a 1:1 mixture by weight of ethylene oxide and propylene oxide with butanol; minimum molecular weight 1,500; Chemical Abstracts Service Registry No. 9038–95–3.	Addition to food not to exceed 10 parts per million.

Substances	Limitations
α -Butyl- <i>omega</i> -hydroxypoly(oxypropylene); minimum molecular weight 1,500; Chemical Abstracts Service Registry No. 9003–13–8.	Do.
Castor oil	Do.
Castor oil, dehydrated	Do.
Castor oil, partially dehydrated	Do.
Dialkyldimethylammonium aluminum silicate (CAS Reg. No. 68953–58–2), which may contain up to 7 percent by weight 1,6-hexanediol (CAS Reg. No. 629–11–8), where the alkyl groups are derived from hydrogenated tallow fatty acids (C ₁₄ –C ₁₈) and where the aluminum silicate is derived from bentonite .	For use only as a gelling agent in mineral oil lubricants at a level not to exceed 15 percent by weight of the mineral oil.
Dimethylpolysiloxane (viscosity greater than 300 centistokes) ...	Addition to food not to exceed 1 part per million.
Di (<i>n</i> -octyl) phosphite (CAS Reg. No. 1809–14–9)	For use only as an extreme pressure-antiwear adjuvant at a level not to exceed 0.5 percent by weight of the lubricant.
Disodium decanedioate (CAS Reg. No. 17265–14–4)	For use only: 1. As a corrosion inhibitor or rust preventative in mineral oil-bentonite lubricants at a level not to exceed 2 percent by weight of the grease. 2. As a corrosion inhibitor or rust preventative only in greases at a level not to exceed 2 percent by weight of the grease.
Disodium EDTA (CAS Reg. No. 139–33–3)	For use only as a chelating agent and sequestrant at a level not to exceed 0.06 percent by weight of lubricant at final use dilution.
Ethoxylated resin phosphate ester mixture consisting of the following compounds: 1. Poly(methylene- <i>p</i> - <i>tert</i> -butyl- phenoxy)poly-(oxyethylene) mixture of dihydrogen phosphate and monohydrogen phosphate esters (0 to 40 percent of the mixture). The resin is formed by condensation of 1 mole of <i>p</i> - <i>tert</i> -butylphenol with 2 to 4 moles of formaldehyde and subsequent ethoxylation with 4 to 12 moles of ethylene oxide; . 2. Poly(methylene- <i>p</i> -nonylphenoxy) poly(oxyethylene) mixture of dihydrogen phosphate and monohydrogen phosphate esters (0 to 40 percent of the mixture). The resin is formed by condensation of 1 mole of <i>p</i> -nonylphenol with 2 to 4 moles of formaldehyde and subsequent ethoxylation with 4 to 12 moles of ethylene oxide; and . 3. <i>n</i> -Tridecyl alcohol mixture of dihydrogen phosphate and monohydrogen phosphate esters (40 to 80 percent of the mixture; CAS Reg. No. 56831–62–0) . Fatty acids derived from animal or vegetable sources, and the hydrogenated forms of such fatty acids . 2-(8-Heptadecenyl)-4,5-dihydro-1 <i>H</i> -imidazole-1-ethanol (CAS Reg. No. 95–38–5) . Hexamethylenebis(3,5-di- <i>tert</i> -butyl-4-hydroxyhydrocinamate) (CAS Reg. No. 35074–77–2) . α -Hydro- <i>omega</i> -hydroxypoly (oxyethylene) poly(oxypropylene) produced by random condensation of mixtures of ethylene oxide and propylene oxide containing 25 to 75 percent by weight of ethylene oxide; minimum molecular weight 1,500; Chemical Abstracts Service Registry No. 9003–11–6. 12-Hydroxystearic acid . Isopropyl oleate	For use only as a surfactant to improve lubricity in lubricating fluids complying with this section at a level not to exceed 5 percent by weight of the lubricating fluid.
Magnesium ricinoleate	For use only as an adjuvant (to improve lubricity) in mineral oil lubricants.
Mineral oil	For use only as an adjuvant in mineral oil lubricants at a level not to exceed 10 percent by weight of the mineral oil.
<i>N</i> -Methyl- <i>N</i> -(1- <i>oxo</i> -9- <i>octadecenyl</i>)glycine (CAS Reg. No. 110–25–8) .	Addition to food not to exceed 10 parts per million.
<i>N</i> -phenylbenzenamine, reaction products with 2,4,4-trimethylpentene (CAS Reg. No. 68411–46–1) .	For use as a corrosion inhibitor at levels not to exceed 0.5 percent by weight of the lubricant.
Petrolatum	For use only as an antioxidant at levels not to exceed 0.5 percent by weight of the lubricant.
Phenyl- α -and/or phenyl- β -naphthylamine	Complying with § 178.3700. Addition to food not to exceed 10 parts per million.
Phosphoric acid, mono- and dihexyl esters, compounds with tetramethylnonylamines and C _{11–14} alkylamines .	For use only, singly or in combination, as antioxidant in mineral oil lubricants at a level not to exceed a total of 1 percent by weight of the mineral oil.
Phosphoric acid, mono- and diisooctyl esters, reacted with <i>tert</i> -alkyl and (C ₁₂ –C ₁₄) primary amines (CAS Reg. No. 68187–67–7) .	For use only as an adjuvant at levels not to exceed 0.5 percent by weight of the lubricant.
	For use only as a corrosion inhibitor or rust preventative in lubricants at a level not to exceed 0.5 percent by weight of the lubricant.

Substances	Limitations
Phosphorothioic acid, O, O, O-triphenyl ester, <i>tert</i> -butyl derivatives (CAS Reg. No. 192268–65–8) .	For use only as an extreme pressure-antiwear adjuvant at a level not to exceed 0.5 percent by weight of the lubricant.
Polyurea, having a nitrogen content of 9–14 percent based on the dry polyurea weight, produced by reacting tolylene diisocyanate with tall oil fatty acid (C ₁₆ and C ₁₈) amine and ethylene diamine in a 2:2:1 molar ratio .	For use only as an adjuvant in mineral oil lubricants at a level not to exceed 10 percent by weight of the mineral oil.
Polybutene (minimum average molecular weight 80,000)	Addition to food not to exceed 10 parts per million.
Polybutene, hydrogenated; complying with the identity prescribed under § 178.3740.	Do.
Polyethylene	Do.
Polyisobutylene (average molecular weight 35,000–140,000 (Flory)) .	For use only as a thickening agent in mineral oil lubricants.
Sodium nitrite	For use only as a rust preventive in mineral oil lubricants at a level not to exceed 3 percent by weight of the mineral oil.
Tetrakis[methylene(3,5-di- <i>tert</i> -butyl-4-hydroxyhydrocinnamate)]methane (CAS Reg. No. 6683–19–8) .	For use only as an antioxidant in lubricants at a level not to exceed 0.5 percent by weight of the lubricant.
Thiodiethylenebis (3,5-di- <i>tert</i> -butyl-4-hydroxyhydrocinnamate) (CAS Reg. No. 41484-35-9) .	For use as an antioxidant at levels not to exceed 0.5 percent by weight of the lubricant.
Tri[2(or 4)-C ₉₋₁₀ -branched alkylphenyl]phosphorothioate (CAS Reg. No. 126019–82–7) .	For use only as an extreme pressure-antiwear adjuvant at levels not to exceed 0.5 percent by weight of the lubricant.
Triphenyl phosphorothionate (CAS Reg. No. 597–82–0)	For use as an adjuvant in lubricants herein listed at a level not to exceed 0.5 percent by weight of the lubricant.
Tris(2,4-di- <i>tert</i> -butylphenyl)phosphite (CAS Reg. NO. 31570–04–4) .	For use only as a stabilizer at levels not to exceed 0.5 percent by weight of the lubricant.
Thiodiethylenebis(3,5-di- <i>tert</i> -butyl-4-hydroxyhydrocinnamate) (CAS Reg. No. 41484–35–9) .	For use as an antioxidant at levels not to exceed 0.5 percent by weight of the lubricant.
Zinc sulfide	For use at levels not to exceed 10 percent by weight of the lubricant.

(b) The lubricants are used on food-processing equipment as a protective antirust film, as a release agent on gaskets or seals of tank closures, and as a lubricant for machine parts and equipment in locations in which there is exposure of the lubricated part to food. The amount used is the minimum required to accomplish the desired technical effect on the equipment, and the addition to food of any constituent identified in this section does not exceed the limitations prescribed.

(c) Any substance employed in the production of the lubricants described in this section that is the subject of a regulation in parts 174, 175, 176, 177, 178 and §179.45 of this chapter conforms with any specification in such regulation.

[42 FR 14609, Mar. 15, 1977]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §178.3570, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 178.3600 Methyl glucoside-coconut oil ester.

Methyl glucoside-coconut oil ester identified in §172.816(a) of this chapter may be safely used as a processing aid (filter aid) in the manufacture of

starch, including industrial starch-modified complying with §178.3520, intended for use as a component of articles that contact food.

§ 178.3610 *a*-Methylstyrene-vinyltoluene resins, hydrogenated.

Hydrogenated *α*-methylstyrene-vinyltoluene copolymer resins having a molar ratio of 1 *α*-methylstyrene to 3 vinyltoluene may be safely used as components of polyolefin film intended for use in contact with food, subject to the following provisions:

(a) Hydrogenated *α*-methylstyrene-vinyltoluene copolymer resins have a drop-softening point of 125° to 165 °C and a maximum absorptivity of 0.17 liter per gram centimeter at 266 nanometers, as determined by methods titled “Determination of Softening Point (Drop Method)” and “Determination of Unsaturation of Resin 1977,” which are incorporated by reference. Copies are available from the Center for Food Safety and Applied Nutrition (HFS–200), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, or available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.